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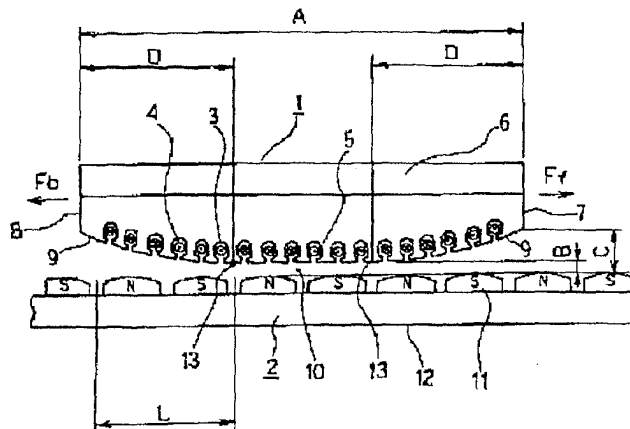
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TITLE : LINEAR MOTOR



ABSTRACT : PROBLEM TO BE SOLVED: To decrease thrust ripples by setting the relationships of the length of the moving direction of an N pole and an S pole, the dimension of a space, the size of the interval of the secondary-side permanent magnets at both end parts of a magnetic pole part and the distance from the position, where the dimension of the space begins to increase to the space side, to the end part within the specified ranges.

SOLUTION: A primary-side magnetic-pole core 1 of a linear motor faces a secondary-side permanent magnet 2 through a space 10. At the side of a front end 7 and the side of a rear end 8 of a magnetic pole part 5 in the moving direction, curved parts 9 are formed. Furthermore, when the length of the moving direction of an N pole and an S pole is set L, the size of the space 10 between the magnetic pole 5 closest to the secondary-side permanent magnet and the permanent magnet 10 is set as B and the interval between both ends 7 and 8 of the magnetic pole part 5 in the moving direction and the secondary permanent magnet is set as C, the relationship between B and C is set as $C > B$, the relationship between a distance D from a position 13, where the space B begins to increase to the side of the interval to the pole-pair dimension L is set as $D \geq L$ and the relationship between the interval C and the pole-pair dimension L is set as $0.5 \times L \leq C \leq 0.1 \times L$. As a result, the linear motor, wherein thrust ripples can be decreased, is obtained.

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